

REMARKS

Favorable reconsideration and withdrawal of the objection and rejections set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

The specification has been amended to attend to any informalities. It is respectfully submitted that no new matter has been added.

Claims 1 through 4, 6 through 10, and 12 are now pending in the application. Claims 5 and 11 have been canceled. Claims 1, 4, 6, and 8 through 10 have been amended to even more succinctly define the invention and/or to improve their form. Claim 12 has been added to accord Applicants an additional scope of protection commensurate with the disclosure. It is respectfully submitted that no new matter has been added. Claims 1 and 6 are the only independent claims present in the application.

Claims 6 through 11 are objected to because of the reasons set forth in the Official Action. Accordingly, Claim 6 has been amended to change the objected-to "cover cover" to "cover" and Claim 8 has been amended to change the objected to "protection" to "projection".

Claims 1, 2, and 6 through 8 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,737,675 (Okada, et al.). Claim 3 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Okada, et al. in view of Japanese Patent Document No. 11-095638 (Kawakami, et al.). Claims 4 and 9 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Okada, et al. in view of U.S. Patent No. 5,363,177 (Nakano, et al.). Claim 10 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Okada, et al. in view of U.S. Patent No. 5,708,912 (Lee).

The rationale underlying each of the foregoing art rejections is succinctly set forth in the Official Action. With regard to the claims as amended, the rejections are respectfully traversed.

Independent Claim 1 as amended is directed to a developer supply container that is detachably mountable to an image forming apparatus. The container has a developer accommodating portion and a developer discharging portion which has a hole through which a developer passes and a shutter that closes and opens the hole. A cover covers the developer discharging portion and is movable between a first position in which the cover covers the developer discharging portion and a second position in which the developer discharging portion is exposed. The second position is closer to the developer accommodating portion than the first position.

Independent Claim 6 as amended is directed to image forming apparatus having an image bearing member and a developing unit for developing a latent image formed on the image forming member. A developer supply container detachably mountable to the main assembly of the image forming apparatus has a developer accommodating portion and a developer discharging portion having a hole through which a developer passes and a shutter for closing and opening the hole. A cover covers the developer discharging portion. The cover is movable between a first position in which the cover covers the developer discharging portion and a second position in which the developer discharging portion is exposed. The second position is closer to the developer accommodating portion than the first position.

In Applicants' view, Okada et al. discloses a toner supply device in which a toner cartridge can smoothly be inserted and removed. The toner supply device has a toner

supply device main body capable of removably setting the toner cartridge to a setting position. A guide tray in the toner supply device guides the toner cartridge along an insertion direction when the toner cartridge is inserted to and pulled out from the setting position so that the toner cartridge is smoothly inserted and removed. The guide tray can assume a guide posture for guiding the insertion and removal of the toner cartridge, and a retreat posture where the guide tray is being retreated to a retreat position. Various engagement members on the guide tray secure or release the toner cartridge to or from the guide tray.

According to the invention defined in Claims 1 and 6 as amended, a developer discharge portion has a hole through which a developer passes and a shutter that closes and opens the hole. In addition to the shutter for opening and closing the hole, a cover that covers the developer discharge portion moves between a first position in which it covers the developer discharge portion and a second position in which the developer discharge portion is exposed. The second position of the cover is closer to the developer accommodating position than the first position. Advantageously in the second position of the cover for exposing the developer discharge portion, the cover does not obstruct access to the main assembly of the image forming apparatus.

Okada et al. may teach a shutter member 250 that is slidably attached to a flange that opens and closes a toner falling opening. It is a feature of Claims 1 and 6 as amended that a shutter opens and closes a hole in a developer discharging portion and that a cover that covers the developer discharging portion moves between a first position in which the cover covers the developer discharging portion and a second position in which the developer discharging portion is exposed. Accordingly, it is not seen that Okada et al.'s

shutter arrangement wherein a shutter opens and closes only a toner falling hole located in a toner flange 203 (developer discharging portion) of a toner cartridge main body 201 (developer supply container) in any manner teaches or suggests the feature of Claims 1 and 6 of the combination of a shutter to open and close a hole in a developer discharging portion and, in addition, a cover that covers the developing discharging portion so that the cover covers the whole developer discharge portion that includes the hole in a first position and exposes the whole developer discharge portion in a second position. It is a further feature of Claims 1 and 6 that the second position of the cover exposing the developer discharging portion is closer to the developer accommodating portion than the first position covering the developer discharging portion. Okada et al.'s folding type of shutter member which only opens and closes a hole in a toner flange is directed away from and could not in any manner be construed as having a second position in a second toner exposing position that is closer to the toner cartridge main body than a first toner cartridge main body covering position as the cover of Claims 1 and 6. At least in these respects, It is believed that Claims 1 and 6 as amended are completely distinguished from Okada et al. and are allowable.

A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims 1 and 6 herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of

the invention, however, the individual consideration or reconsideration, as the case may be, of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable consideration and reconsideration and early passage to issue of the present application.

It is respectfully submitted that the claims on file are allowable over the art of record and that the application is in condition for allowance. Favorable reconsideration and early passage to issue of the present application are respectfully submitted.

Applicants' attorney, William M. Wannisky, may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our New York office at the address shown below.

Respectfully submitted,



Attorney for Applicants
Jack S. Cubert
Registration No. 24,245

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

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VERSION WITH MARKINGS TO SHOW CHANGES

MADE TO THE SPECIFICATION

The paragraph starting at page 4, line 6 and ending at page 4, line 21 has been amended as follows:

According to another aspect of the present invention, there is provided an image forming apparatus comprising an image bearing member; developing means for developing a latent image formed on said image bearing member; and developer supply container detachably mountable to a main assembly of said image forming apparatus, said container including; a developer accommodating portion; a developer discharging portion; and a cover [cover] in said developer discharging portion, said cover being movable between a first position in which said cover covers said developer discharging portion and a second position in which said developer discharging position is exposed, wherein said second position is closer to said developer accommodating portion than said first position.

The paragraph starting at page 10, line 1 and ending at page 10, line 4 has been amended as follows:

Next, the structures of the various components of the above described image forming apparatus will be described in detail in the obvious [orderly] order.

The paragraph starting at page 19, line 21 and ending at page 20, line 17 has been amended as follows:

With the provision of the transfer residual toner dispersing means [8g] 3g, the transfer residual toner particles, which have been dispersed in a certain pattern and are carried from the transfer station d to the toner charge controlling means 3h, are evenly dispersed across the peripheral surface of the photoconductive drum 2 even if the amount of the transfer residual toner particles is large. In other words, the transfer residual toner particles, which have been distributed in a certain pattern on the peripheral surface of the photoconductive drum 2, are 5 evenly dispersed across the peripheral surface of the photoconductive drum 2, being therefore prevented from being concentrated to certain portions of the toner charge controlling means 3h, assuring that all the transfer residual toner particles are unified in polarity, being charged to the normal polarity. Therefore, the efficiency with which the transfer residual toner particles are prevented from adhering to the charge roller 3a is improved. Consequently, the formation of a ghost image, that is, the ghostly pattern in a completed image, for which the transfer residual toner particles are responsible, is prevented.

The paragraph starting at page 23, line 17 and ending at page 24, line 11 has been amended as follows:

The developing apparatus 4 in this embodiment is a contact type developing apparatus which uses a two component developer (two component magnetic brush type 20 developing apparatus). Referring to Figure 2, it comprises a development sleeve 4a as a developer bearing member, a magnetic roller 4b disposed in the hollow of the development sleeve 4a, and developer, that is, a mixture of carrier and toner, which is 25 borne on the peripheral surface of the development sleeve 4a. This development sleeve 4a constitutes the developing means. The developing apparatus 4 is also provided with a regulating blade 4c, which is disposed a predetermined gap away from the peripheral surface of the development sleeve 4a so that as the development sleeve 4a is rotated in the direction of an arrow mark, a thin layer of the developer is formed on the peripheral surface of the development sleeve 4a. Incidentally, even though a two component magnetic brush type developing apparatus is employed as the developing apparatus 4 in this embodiment, the developing apparatus choice is not limited to this type of developing apparatus.

The paragraph starting at page 25, line 17 and ending at page 25, line 27 has been amended as follows:

Referring to Figure 2, a developer holding portion 4h, in which the developer is circulated, is divided by a partitioning wall 4d into a two chambers. The partitioning wall 4d extends in the lengthwise direction of the process cartridge 1 from one end of the developer holding portion 4h to the other for the immediate adjacencies of the end walls of the developer holding portion [46] 4h. The developer holding portion 4h is

provided with a pair of stirring screws 4eA and 4eB, which are disposed in a manner to sandwich the partitioning wall 4d.

The paragraph starting at page 32, line 6 and ending at page 32, line 14 has been amended as follows:

Within the loop of intermediary transfer belt 54a, transfer charge rollers 54fY, 54fM, 54fC, and 54fK are rotationally disposed, each being kept inward surface of the intermediary transfer belt 54a, at a position [correspondent] corresponding to the photoconductive drum 2 on the outward side of the transfer belt 54a, in the radius direction of the photoconductive drum 2 of the corresponding process cartridge.

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO THE CLAIMS

1. (Amended) A developer supply container detachably mountable to an image forming apparatus, comprising:

a developer accommodating portion;

a developer discharging portion having a hole through which a developer passes and a shutter for closing and opening the hole; and

a cover covering said developer discharging portion, said cover being movable between a first position in which said cover covers said developer discharging portion and a second position in which said developer discharging portion [position] is exposed,

wherein said second position is closer to said developer accommodating portion than said first position.

4. (Amended) A container according to Claim 1, further comprising [wherein said discharging portion is provided with a hole for permitting passage of the developer, and said container further comprises] a tape which seals the hole when said container has not been used, wherein said tape has one end fixed to said cover, and wherein said tape is peeled off when said cover is first moved from the first position to the second position.

Claim 5 has been cancelled.

6. (Amended) An image forming apparatus comprising:

an image bearing member;

developing means for developing a latent image formed on said image bearing member; and

developer supply container detachably mountable to a main assembly of said image forming apparatus, said container including;

a developer accommodating portion;

a developer discharging portion having a hole through which a developer passes and a shutter for closing and opening the hole; and

a cover covering [cover in] said developer discharging portion, said cover being movable between a first position in which said cover covers said developer discharging portion and a second position in which said developer discharging portion [position] is exposed,

wherein said second position is closer to said developer accommodating portion than said first position.

8. (Amended) An apparatus according to Claim 6, further comprising a projection for being abutted by said cover, wherein when said container is mounted to the main assembly of said apparatus, said cover abuts said projection [protection] so that movement of said cover is regulated, and wherein said cover moves from the first position to the second position with a mounting action of said container to the main assembly of said apparatus.

9. (Amended) An apparatus according to Claim 6, further comprising

[wherein said discharging portion is provided with a hole for permitting passage of the developer, and said container further comprises] a tape which seals the hole when said container has not been used, wherein said tape has one end fixed to said cover, and wherein said tape is peeled off when said cover is first moved from the first position to the second position.

10. (Amended) An apparatus according to Claim 6, wherein at least said developing means is detachably mountable to the main assembly of said apparatus, and wherein said shutter is movable in response to a relative movement between said container and said developing means [or said image bearing member is detachably mountable to the main assembly of said apparatus].

Claim 11 has been cancelled.